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ABSTRACT

Writing to Read (WTR), a project of the International Business Machine Corporation (IBM), is a language development program designed to facilitate reading, writing, listening and speaking skills of kindergarten and first grade students. This paper reports on an evaluation of WTR in a large suburban school district in Georgia seeking answers to the following questions: (1) whether the program was implemented in the schools as intended by IBM; (2) if the program was cost effective; and (3) what kind of impact the program had on student achievment. Scores from standardized achievement tests, student and teacher questionnaires, field notes, and interviews to evaluate program effectiveness and to identify strengths and weaknesses were analyzed. Results indicated that: (1) the overall goal of WTR was being achieved for most students; (2) WTR seems to have had a positive impact on teachers' opinions that young children can compose; (3) there was a need for attention to the roles of teachers (as instructional leaders in the lab, and in the classroom in support of WTR), students (at the listening library station and in partnership activities), and central office personnel (in monitoring WTR labs); and (4) there was also a need for attention to the time lapse between training and implementation, the amount of guided practice, the continuation of training during implementation, and general inservice training throughout the year. As a result of these findings, changes were implemented to address the issues raised. (Eight tables of data and 10 appendixes of interview information are attached.) (PRA)

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STRENGTHS AND WEAKNESSES IDENTIFIED BY AN EVALUATION OF THE IMPLEMENTATION OF THE WRITING TO READ PROGRAM

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STRENGTHS AND WEAKNESSES IDENTIFIED BY AN EVALUATION OF THE IMPLEMENTATION OF THE WRITING TO READ PROGRAM

PURPOSE

The major purpose of this presentation is to share the results of an evaluation of the Writing to Read (WTR) program which was conducted in a large suburban school district. Personnel in other school systems may benefit from learning of the strengths and weaknesses identified by this program evaluation. Furthermore, information about the changes that resulted from the evaluation may be helpful to others who implement the program.

Writing to Read is a language develop program designed to facilitate reading, writing, listening, and speaking skills of kindergarten and first grade students. Through a series of multisensory activities offered in six learning centers or stations, children are introduced to 42 phonemes through familiar words, award winning children's literature, games and activities, and creative writing. Writing to Read offers students a risk-free environment as they discover that they are able to write whatever they can say, and then they can read whatever they have written.

METHODS AND PROCEDURES

Because Writing to Read had been validated by IBM, the purpose of the evaluation was to obtain information on the quality of the program. Specifically, evaluators sought answers to the following questions:

1. Is the program implemented in the schools as intended by IBM?
2. Is the program cost efficient?
3. What is the impact of the program on student achievement?

Qualitative and quantitative methods were used in the evaluation. Quantitative data sources were student standardized achievement test scores as well as student and teacher questionnaire results. Primary qualitative data sources were observer field notes and student and teacher comments from interview guides and questionnaires. The comments not only clarified the observations, but helped to determine teacher's reasons for doing what they did and to determine teachers' perceptions of the program's effectiveness.

RESULTS

A few of the most significant findings were the following:

1. The overall goal of WTR, that kindergarten and first grade students can write what they can say and read what they can write, is being achieved for most of the students.
2. WTR seems to have a positive impact on teachers' opinions that young children can compose.

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3. In the implementation of the WTR program, the results indicate that there is a need for attention to the following areas:

   a. Teacher role as instructional leader in the lab (especially in coaching students to write)

   b. Teacher role in the classroom in support of WTR, e.g., follow-up activities and correlating WTR skills with classroom curriculum

   c. Student role at the Listening Library Station

   d. Student role in partnership activities

   e. The Central Office personnel role in monitoring WTR labs

4. In the training for the WTR program, the results indicate a need for attention to the following areas:

   a. The time lapse between training and implementation

   b. The amount of guided practice offered during training

   c. The continuation of training in the field during early weeks of implementation

   d. The inservice training for teachers and paraprofessionals throughout the year to address the following needs:

      1. Special teaching skills needed at WTR stations when working with students who lack readiness skills

      2. Lab management and scheduling

      3. Periodic teacher "renewal"

PROGRAM CHANGES AS A RESULT OF THE EVALUATION FINDINGS

As a result of the evaluation findings, the following changes were made:

1. Training scheduled within two weeks of equipment installation

2. Hands-on training for WTR cycle word software

3. Hands-on training for Primary Editor (WTR word processing software)

4. Additional training day added to provide class management and curriculum correlation inservice

5. Additional writing as a process inservice

6. On-site visits monthly by WTR staff

7. Continued inservice training for teachers and paraprofessionals throughout the year on writing, spelling, WTR class management, special needs students in WTR, readiness, parental involvement, and additional software application

RESEARCH & EVALUATION
DEKALB COUNTY SCHOOL SYSTEM
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WRITING TO READ PROGRAM EVALUATION

EXECUTIVE SUMMARY

The Writing to Read Program (WTR) is designed to teach reading and writing to kindergarten and first grade students. The program has been validated by other research studies, the most noted being that conducted by the Educational Testing Service (ETS) (1984). Therefore, the purpose of this program evaluation was not to validate the program, but to evaluate the effectiveness of the program for DeKalb Schools and to identify strengths and weaknesses. The primary focus was on the areas of implementation and student achievement.

The program evaluation was guided by the following objectives:

1. to determine the extent that DeKalb's WTR program goals are achieved.
2. to determine the extent to which the WTR program in DeKalb follows the goals and procedures validated by IBM.

DATA COLLECTION METHODS AND PROCEDURES

Development of the Questionnaire

The items on the questionnaire for the WTR paraprofessionals, teachers, and classroom paraprofessionals were derived primarily from the following sources:

- goals and objectives of the program submitted by WTR Central Office personnel
- field notes from the training
- information obtained from previous studies
- informal visits to WTR labs
- Writing-to-Read teacher's manual

WTR Central Office personnel met in an orientation session with the evaluators. The evaluators asked the Central Office personnel to identify (a) objectives, (b) activities designed to achieve objectives, and (c) performance measures for the objectives and activities. The evaluators constructed questionnaire items to match the performance measures of the activities and objectives. These items were reexamined by the Central Office personnel to ensure that they represented the performance measures as defined by WTR Program personnel. Adjustments were made until a consensus was reached on each item, thus arriving at face validity.

Items 1 through 72 on the Teacher/Paraprofessional Questionnaire cover the following program areas:

I. Student performance activities at the 5 stations (Items 1-5).

II. Student performance outcomes in motor, social, and self-confidence skills as a result of performing the above activities (Items 6-10).

III. Student performance outcomes in reading and writing skills (Items 11-55).

IV. Student performance outcomes in essential skill areas (Items 46-55).

V. Student attendance as a performance outcome (Item 56).

VI. Teacher and paraprofessional demographic data (Items 57-61).

VII. Training performance activities (Items 62-72). (These items were also based on the observations made by one of the evaluators who attended the training session.)

VIII. Support and maintenance of equipment (Items 73-84).

IX. A free response section.

Administration of the Questionnaire and Sample Population

The questionnaire was administered to all WTR lab paraprofessionals, kindergarten and first grade teachers, and their paraprofessionals in all WTR schools. In addition, any other teachers, such as special education, who might use the WTR lab on a regular basis were asked to complete the questionnaire. A separate questionnaire was administered to principals in WTR schools and is discussed in another section.

Observation Methodology

Respondents' perceptions on the questionnaire were cross-checked (triangulated) with data from observations of two evaluators in eleven different WTR labs. Observation time exceeded 22 hours. The 11 schools were selected by a strategic sampling process that included

- representatives from each year of implementation,
- representatives of high, medium, and low SES, and
- representatives of effective and less effective implementation of WTR as determined by the program coordinator and her staff.

Limitations

1. No attempt was made to attribute any gains to the WTR program alone as other variables that affect student achievement were not controlled.

2. Questionnaire results focused primarily on first grade because at the time of the administration of the questionnaire, most kindergarten students had not yet started or had only recently started to WTR.
3. Because the evaluators were visible and taking notes during the observations, these obtrusive factors may have affected participant behavior.

RESULTS AND ANALYSES OF THE DATA

Results and analyses of the findings from the questionnaire are presented first, followed by the findings from the observations, teacher's manual, and other sources relevant to the question and/or category. There were a total of 361 responses to the questionnaire; 160 of these added written comments. Ninety percent of principals who had WTR in their schools responded to a separate questionnaire.

Students Performing Required Activities at Each Station

The results of the responses from WTR lab paraprofessionals, teachers, and classroom paraprofessionals are displayed in Table 1. Respondents indicate that, overall, they perceived students performing the required activities at each station: Computer Listening, Work Journal, Listening Library, Make Words, Writing-Computer Table.

This corresponds with the evaluators' observations except for students working with partners at the Computer Listening and Work Journal stations and performing activities at the Listening Library station.. In some cases, students did not work with a partner at the Computer Listening or the Work Journal stations. This was more common in schools where absenteeism was high. Even when students had a partner, there was little interaction between the two students. In almost all of the labs, evaluators observed students taking turns operating the recorders and sometimes in selecting their books at the Listening Library station. Yet students were not performing the other required activities, such as attending to the story and matching the words on the tape with those in the story.

All of the paraprofessionals interviewed mentioned the problems with the Listening Library and confirmed that students, especially first graders, become bored with the lack of variety and number of books. This was also a place where discipline problems occurred most frequently according to the WTR paraprofessionals. It is likely that the monotone voice of the recordings and the slow speed at which the books are read contribute to student boredom. (Additional details regarding the Listening Library station are in Appendix A.)

When addressing the Listening Library Station, the training contained warnings that students would become bored by the end of first grade. Trainers shared that many paraprofessionals had

borrowed other books and matching audio tapes from their school libraries and reading specialists, or had let students record each other's stories.

The WTR teacher's manual (Martin, 1986) stresses the need for students to select their books independently. In over half of the labs observed, however, books were pre selected for students.

Significant Improvements as a Result of WTR

Fine Motor Skills, Social Skills, Skills In Working Independently, and Self Confidence

The majority of respondents perceive the WTR program as meeting these objectives, though respondents seem less sure of student developments in social skills. Questionnaire responses are displayed in Table 2.

Evaluators observed that students were operating the keyboard, diskettes, and audio cassettes. Furthermore, evaluators observed students, for the most part, working with their partner and in small groups. One WTR paraprofessional pointed out, "Some students don't like each other, but find that they can work together."

Students did appear in most cases to manage stations on their own, but they were reminded by the teacher and WTR paraprofessional to complete their progress chart. In the area of enhancing

feelings of success thus increasing self-confidence, one principal wrote, "I have noticed a great amount of improvement with regard to our students' self-image, motivation to read and overall enthusiasm toward school."

Reading and Writing Skills

Listening Skills

Respondents (74%) perceived students as making significant gains in listening skills in the overall area. (Questionnaire results are displayed in Table 3A). An item analysis, however, shows that students are perceived to gain more in the skill of repeating and recognizing sounds and words than in increasing oral vocabulary or in listening comprehension. One comment from the questionnaire stated, however, "...we teach these skills thoroughly before entering the program."

The above data are supported by the evaluators' observations that the WTR lab affords students with the opportunity to write and repeat words in response to the computer and audio tape directions. But the teachers and paraprofessionals were not frequently observed requiring students to talk with other students and/or the teachers about their creations (oral practice in a meaningful context).

Letter Recognition

Respondents (87%) perceive students as making significant gains in letter recognition skills in the overall area (Table 3B). The evaluators also observed these hands-on operational skills being practiced, though students, especially those in kindergarten, had difficulty at the keyboard when they could not recognize letters. (See Appendix B for details of observations and respondents' comments.)

Speech-to-Print Correlation

Respondents (72%) perceive students as making significant gains in speech-to-print correlational skills in the overall area (Table 3C). Teachers were less sure (58%) that students had made gains in matching words heard on the Listening Library tape to the print in the book, supporting the observations.

The evaluators observed that students listened but rarely pointed to the words in the book. (A more detailed report of student behavior at the Listening Library station is in Appendix A.) A failure to observe students matching speech to print when at the Listening Library station could have been because of students' inattention rather than inability to do so.

Chart Reading Skills

Respondents (70%) perceived students as making significant gains in chart-reading skills in the overall area (Table 3D). As

shown in the table, the more mechanical, routine tasks such as completing the work journal chart and following the daily assignment sheet made higher gains than the thinking skill areas such as interpreting information and using charts in some Make Words activities. These results correspond with the evaluators' observations that teachers emphasized the mechanical and routine activities more than thinking skills activities such as asking students why or seeking alternative answers. Students were rarely given opportunities to interpret the information from the work journal chart.

Computer Literacy Skills

Respondents (73% overall) perceive students as making significant gains in computer literacy skills (Table 3E), though teachers are not so sure about students' abilities to use the printer.

The low percentage in the area of using the printer is probably because most students observed did not use the printer. Either the teacher or the lab paraprofessional printed student stories.

Oral Vocabulary Skills

Respondents (77% overall) perceive students as making significant gains in oral vocabulary skills as indicated in abilities

to provide appropriate verbal responses to directions on WTR software, teacher questions, and in peer and adult language interaction (Table 3F).

Because of the brevity of the observations, evaluators could not attempt to evaluate student oral vocabulary development.

Writing Skills

Respondents (64% overall) perceive students as making gains in writing skills (Table 3G). The gain is more substantial in student abilities to write what they can say and write on their own than in student abilities to produce various types of writing and writing for another audience.

In the majority of cases, evaluators observed students writing and then reading what they had written. Students were observed at all stages of writing development from typing the same letter continually to writing complete sentences and paragraphs. Usually, students were observed going to the Writing station, sitting in front of the words processor, and being told to "...write a story." In many cases, the teachers who generally monitored this station would say something similar to, "What are you going to write today?" Yet the WTR teacher's manual and the trainers stressed the importance of facilitating student writing. (See Appendix C for further details.)

Spelling Skills

Table 3H shows that respondents (66% overall) perceive students as making significant gains in spelling skills, though the gain in new words is more substantial than in the other areas.

One of educators' and parents' major concerns is that students will develop poor spelling habits. Previous studies (ETS, 1984) indicated that WTR students perform as well as non-Writing to Read students. Yet one principal wrote, "Second grade standardized test scores dropped considerably this year in the area of spelling."

Reading Skills

Fewer of the respondents (56% overall) perceive students as making significant gains in reading skills as shown in Table 3I. This corresponds with evaluators observations that methods suited to the development of these skills are not stressed in the program.

Effects on Skill Development

Teachers and paraprofessionals were asked if most students learned various skills better in WTR than if there were no such program. There is a wide range of the results for the specified skill areas shown in Table 4. Almost all respondents view the program as very strong in developing computer skills and reasonably strong in sound/symbol correspondence. There is less than

50% agreement that WTR is better than no program in the development of social skills and word pronunciation skills. The low percentages in those areas could be the result of little student interaction, the lack of focus of the program on pronunciation, and teacher and/or WTR paraprofessional ability to emphasize pronunciation better than the computer.

Student Attendance

Respondents did not perceive that WTR significantly improved attendance. As shown in Table 5, a small percentage of the respondents indicated that attendance did improve as a result of WTR, indicating a small but qualitative contribution of WTR to attendance while suggesting that other and more compelling factors (e.g. SES) probably influence attendance.

Demographic Data

Demographic data is displayed in Table 6. Of those responding to the questionnaire, 13% were WTR paraprofessionals which represented 77% of the total number of WTR paraprofessionals. There was an almost equal representation of kindergarten and first grade teachers.

Training and Ongoing Support

Time Between Training and Implementation

There is some variation shown in Table 6 in the responses to the time lapse between training and implementation (item 61). For two-thirds of those implementing WTR, there was at least 4 weeks between training and implementation. Researchers in the area of adult learning and staff development indicate that time between training and implementation should be kept to a minimum. When training includes instruction in new technology, and when guided practice is very limited, the time lapse becomes even more critical to implementors.

Quality of Training

The responses to items 62 to 72 in Table 7 provide data to indicate that 75% of the overall respondents were of the opinion that the training was adequate. Furthermore, 88% of the respondents agreed that the information obtained at the training was helpful to them in the lab. When looking only at the WTR paraprofessional responses, 91% stated that the training was helpful. However, the results reflect that more could be done in the areas of parental involvement, writing across the curriculum, and computer technology.

The evaluator observed that the training was well-done, thorough, and organized. Yet it is true as one respondent stated

that, "Training for the program was excellent but a lot of information is packed into three full days and it is overwhelming trying to remember all that has been given to you." This would indicate a need for ongoing training and support.

Observations in the WTR labs and comments on the questionnaire indicated that there was a need for more training in the area of computer technology. During the training, only a fraction of the time was actually spent on the computers. In addition, smaller training classes would allow for more time at the computers. (Appendix D provides specific details from observations and comments regarding the training.)

Parent Training

A majority of the respondents reported that parents were oriented at a PTA meeting, grade meeting or by a video (Table 8, item 80). Thirty-four percent said that the parent orientation was conducted by the WTR paraprofessional and 28% said that Dr. Long conducted the orientation (Table 8, item 81). Respondents (61%) perceived that parents liked the program (Table 8, item 81).

It is stressed in the teacher's manual and in the training that it is important for parents to understand that WTR is a unique program and to know how they as parents can support the program. Furthermore, central office staff listed parent training

as one of their goals and objectives, though it appears that the WTR paraprofessional is conducting the parent orientation meeting. The reason why WTR paraprofessionals are conducting the orientation is not known. It could be that paraprofessionals did not request help from the Central Office. This responsibility, though, is not part of the WTR paraprofessional's job description.

Ongoing Support

When asked how often Central Office staff members visited the lab when the respondent was present, 49% said quarterly and 38% did not respond to this question (Table 8, item 73). Several comments reported that they had not been visited. Quarterly was the least frequent choice provided. Furthermore, questionnaire responses indicated that 79% of the respondents had never participated in a training workshop after school; 75% had never participated in a training workshop on a teacher workday (Table 8, items 78 and 79). Principals reported that the support for the Central Office staff has been adequate.

Regarding the function of the Small Street Journal, which is in its first year, to provide helpful ideas and information, less than half of the respondents reported that the Journal was often helpful (Table 8, item 77).

It was noted in the preceding section that there was a need for continuing support after the initial training. Some written comments indicated that the respondents received helpful support

from both the coordinator and her assistant; yet other respondents indicated that they had never seen Central Office personnel visiting the lab. In addition, comments included suggestions that along with inservice for new teachers, "...the old teachers involved in WTR need to have a workshop or meeting at least once a year to exchange ideas, to have a review and to get inspiration." Comments from the questionnaire and interviews with the paraprofessionals indicated that they learned most when visiting other labs and would like to continue to do that.

Support From Local School Personnel

Almost all of the principals (96%) responded that they had had an opportunity to observe the WTR program and 48% had spent five or more hours in the lab; 30% reported spending two to four hours in the lab. These large percentages indicate overwhelming principal support for the WTR program. Two comments from the teacher questionnaire indicated that WTR paraprofessionals had been pulled out of the lab for other duties, thus closing the labs.

Equipment, Supplies, and Facilities

Regarding equipment problems, 28% responded that they encountered no problem, 25% responded that they had problems weekly or bi-weekly (Table 8, items 74 and 75). Yet half of the respondents reported that the problems were usually remedied immediately or

within a week indicating little disruption to learning. Generally, respondents (74%) indicated that they had an adequate supply of equipment and supplies (Table 8, item 76).

Cost

During the training, the Central Office coordinator said the initial cost to set up a lab was $38,000, with approximately $2,200 a year for recurring journal costs. The DeKalb's "On Board" reported that equipment cost per school was $10,584; software and instructional materials cost was $5,215 per school. A paraprofessional's salary is approximately $17,000. This estimate does not include the cost of the training or substitutes when teachers are out of their classrooms for three days.

Equipment and Supplies

During the observations, equipment was operational except in a few instances. Some of the comments from teachers, paraprofessionals, and principals indicated a need for additional computers, printers, supplies for the Make Words station, and books for the Listening Library station. Comments also reflected a need for replacement and/or repair of older equipment.

Facilities

For the most part, WTR labs were in large rooms in convenient locations. Yet one lab was using one-half of a regular size classroom; the other half was shared with an instructional specialist. Needless to say, there was barely room to move, but the WTR paraprofessionals and teachers made the best of the situation. In another lab, students were also crowded into a small classroom.

Management

Questionnaire responses indicated that students usually completed three to four stations per day (Table 8, item 83). This corresponds with what was recommended in the training and what was observed.

On the other hand, one of the 10 Vital Practices in the teacher's manual states that students are to use the Computer Work Journal and Writing Stations daily. With the current management system, students were unable to be at each of these stations daily. Also, according to the manual, students are to write every day. Less than half of the respondents indicated that students composed daily (Table 8, item 95), and a much smaller percentage responded that students printed daily (Table 8, item 94).

Different management strategies were observed. In some cases, students entered the lab and went immediately to a station. In other cases, the WTR paraprofessional would tell them

where to go after students entered the lab. Also, the manual states that students should move independently from station to station. The training stressed that teachers need to choose the management system that worked best for them, and trainers suggested that students be told when to move.

There were indications in the comments and in the observations that students needed closer monitoring. "In stations that do not have adult supervision, one cannot tell if the children perform the required activities. In stations with supervision, children perform well because they have assistance and guidance to help them stay on task."

Some WTR paraprofessionals indicated that the partners are affected because of high absentee rate which affects their staying with a partner. One of the 10 Vital Practices is that students are to work in pairs. In most cases, students worked with a partner, but in some cases students worked the Computer and Work Journal Stations alone. Minimal interaction could also for teachers and paraprofessionals lower perceptions of WTR significantly affecting student social skills.

Some concern was expressed about the lab closing when WTR paraprofessionals were absent. WTR paraprofessionals who were interviewed confirmed that the lab did close when they were absent, but this was not a problem as they were absent infrequently.

Teacher and WTR Paraprofessional Roles

Comments and observations reflected some confusion over teacher role in the WTR lab, both perceived and actual. For example, "I would like to be able to float from station to station. At our school, the teacher is only allowed to work at the Writing Station and the classroom paraprofessional only at the Work Journal. I would like for the program to be more flexible, so that I can understand what's going on at the other areas."

Teachers not acting as instructional leaders, even though this role was stressed in training and in the manual, was observed in lab visits. (See Appendix E for further description of teacher behavior in the lab.)

For the most part, the WTR paraprofessional appeared to be more than a lab manager, her primary function. WTR paraprofessionals were observed demonstrating effective teaching behaviors such as questioning, encouraging, evaluating student performance, and motivating students to write. In addition, when asked who determines the activities for the Make Words Station, the responses indicated that the WTR paraprofessional is largely responsible for the activities at that station (Table 8, item 92). However, the trainers emphasized that the teacher and the paraprofessional are to work together. A significant percentage of the respondents indicated that the professional relationship between the WTR paraprofessional and teacher is very good or

excellent. (See Appendix F for a further description of paraprofessional behavior and related comments from the questionnaire.)

. Follow-up to Regular Curriculum

When all respondents were asked if skills learned in WTR transfer to the regular curriculum (item 96), a significant percentage said yes (Table 8). Most respondents also reported that skills learned in WTR correlate with the classroom curriculum(item 97). The majority of respondents reported that they liked the program (item 98). On the other hand, when teachers were asked how often they used WTR follow-up activities in the regular classroom (item 94), a little over half reported almost always or often.

The teacher's manual recognizes the importance of carrying the skills learned in WTR to the regular classroom and vice-versa. Trainers provided examples of how to correlate WTR with other content areas. Principals and teachers indicated a need to continue with similar kinds of WTR experiences when students have graduated from WTR. In this study, there was no attempt to confirm by observation to what degree WTR and the regular classroom curriculum were coordinated but cited the lack of time as a major reason for not following up in the classroom. (See Appendix G for additional details regarding follow up.)

Time and Scheduling

Regarding the physical utilization of the WTR labs, it appears that the labs are well-used. Paraprofessionals only responded to items 99 and 100 (Table 8). Furthermore, a large percentage responded that the lab was used by kindergarten, 1st, and/or special education students.

Time Out of Classroom

Teachers were asked in item 91 (Table 8) if the WTR program uses time that should be used for regular classroom teaching. Half of the respondents said no.

Comments regarding the time away from the classroom were mixed. Generally however, comments indicated that this was just one more thing for teachers to do. Written and oral comments suggested that students attend WTR fewer times a week. (Appendix H provides comments and suggestions regarding the time out of the classroom.)

Problems with Scheduling

No problems with scheduling were observed. Oral and written comments, however, indicated that there might be problems in some cases. These discrepancies suggest a need for closer monitoring by someone other than the teachers and paraprofessionals. (Appendix I provides these comments along with other documentation.)

Perceptions of Student Preferences

Items 85-90 (Table 8) asked the respondents the extent that students seemed to like each of the stations. Respondents perceived that students most like the Writing/Typing and the Computer Listening Stations. The least-liked, in the respondents' opinions, was the Work Journal Station.

Student Achievement

During interviews, WTR paraprofessionals were questioned concerning whether or not they felt the program was beneficial for all students. Generally, they responded that most students made progress in WTR. In fact, trainers emphasized that the program could and should be used with students in special education classes. Comments regarding this are mixed. (See Appendix J for additional comments.)

CONCLUSIONS

1. The overall goal/purpose of WTR, that kindergarten and first grade students can write what they can say and read what they can write, is being achieved for most of DeKalb students.
2. Most of DeKalb's goals for WTR are being achieved effectively.
3. For the most part, WTR is being implemented as specified by IBM.
4. WTR is perceived as an effective and worthwhile program by WTR paraprofessionals, teachers, and classroom paraprofessionals.
5. WTR seems to have a positive impact on teachers' opinions that young children can compose.
6. In the implementation of the WTR program, the data indicate that there is a need for attention to the following areas:
    a. Teacher role as instructional leader in the lab.
    b. Teacher role in the classroom in support of WTR program, e.g. follow-up activities and correlating WTR skills with classroom curriculum.
    c. Student role at the Listening Library Station.
    d. Student role in partnership activities.
    e. The Central Office personnel role in monitoring WTR labs.

CONCLUSIONS - continued

7. In the training for the WTR program, the data indicate that there is a need for attention to the following areas:

    a. The time lapse between training and implementation.

    b. The amount of guided practice offered during training.

    c. The continuation of training in the field during early weeks of implementation.

    d. The inservice training for teachers and paraprofessionals throughout the year to address the following needs:

        1) Special teaching skills needed at WTR stations when working with students who lack readiness skills.

        2) Lab management and scheduling.

        3) Periodic teacher "renewal."

TABLE 1

Teachers/Paraprofessionals Observations of Student Performance on the WTR Program Activities as Designed

N=361

WTR Performance Activities	Frequency Distribution Percent Responses		
	YES	UNSURE	NO/NR
1. Computer Listening Station (works with partner, says words and sounds, types words, manages progress chart, etc.)	95	2	2
2. Work Journal Station (operate audio cassette player, write sound symbol or word on corresponding line in book, etc.)	93	3	3
3. Listening Library Station (select book and corresponding audio tape, read words along with tape, operate audio cassette player, manage progress chart, etc.)	87	6	6
4. Make Words Station (complete various activities)	90	5	4
5. Writing Computer Table Station (use word processor program to compose and type own story, use various materials to develop idea and thoughts by writing and/or illustrating)	89	5	5
MEAN OVERALL PERCENT	**91**	**4**	**5**

TABLE 2

Teachers/Paraprofessionals Observations of Significant Growth/Improvement Resulting from Writing to Read Program in the Area of Motor and Social Skills, and Self Confidence

N=361

Items on Skills Areas	Frequency Distribution Percent Responses		
	YES	UNSURE	NO/NR
6. Fine motor and coordination skills in their abilities to handle/operate keyboard, diskettes, audio cassettes	85	11	3
7. Social skills in working cooperatively with partner	74	14	11
8. Social skills in working cooperatively with other students	72	16	11
9. Skills in working independently to manage the stations on their own	80	9	10
10. Success and self confidence in their abilities to write and read on their own.	79	14	6
MEAN OVERALL PERCENT	**78**	**13**	**8**

TABLE 3

Significant Gains in the Development of Specified Skill Areas Resulting from WTR Program as Observed by Teachers/Paraprofessionals

N=361

Significant Gains in Skill Areas	Frequency Distribution Percent Responses		
	YES	**UNSURE**	**NO/NR**
III-A Listening skills as indicated by abilities to:			
11. repeat sounds and words, and stomp, clap in response to computer	88	7	5
12. repeat and write sounds and words as directed by Work Journal Station	89	5	6
13. point to words and turn pages or appear to read at listening station	76	15	9
14. identify different sounds when listening	81	13	5
15. use an increased oral vocabulary	47	36	15
16. explain in their own words what they have read (listening comprehension)	60	28	11
MEAN OVERALL PERCENT	**74**	**17**	**8**
III-B Letter recognition skills as indicated in abilities to:			
17. respond to visual and audio prompts at computer in typing letters correctly	88	9	2
18. name letters they have typed, correctly	89	7	3
19. identify upper and lower case letters, correctly	85	8	6
MEAN OVERALL PERCENT	**87**	**8**	**4**

Table 3 (continued)

Significant Gains in Skill Areas	Frequency Distribution Percent Responses		
	YES	UNSURE	NO/NR
III-C Speech-to-print correlational skills as indicated by abilities to:			
20. write stories they tell orally	73	14	11
21. read stories they have written	85	7	7
22. match words heard on listening library tape to print in book	58	33	8
MEAN OVERALL PERCENT	**72**	**18**	**9**
III-D Chart reading skills as indicated in their abilities to:			
23. complete work journal chart	82	10	6
24. interpret information from work journal	65	23	11
25. follow daily assignments	75	12	10
26. use charts in some make words activities	59	25	15
MEAN OVERALL PERCENT	**70**	**18**	**11**
III-E Computer literacy skills as indicated in abilities to use effectively:			
27. the basic cycle word/WTR software program	86	9	7
28. the printer	62	14	22
29. word processing program (primary editor, etc.)	72	17	8
MEAN OVERALL PERCENT	**73**	**13**	**12**

Table 3 (continued)

Significant Gains in Skill Areas	Frequency Distribution Percent Responses		
	YES	**UNSURE**	**NO/NR**
III-F Oral vocabulary skills as indicated in abilities to provide appropriate verbal responses to:			
30. directions on the WTR software and tapes	85	9	3
31. teacher questions in the classroom	74	18	6
32. peer and adult language interaction	71	19	8
MEAN OVERALL PERCENT	**77**	**15**	**6**
III-G Writing skills as indicated in abilities to appropriately use:			
33. write what they can say	75	14	9
34. write more skillfully as they progress through various stages of writing development	77	13	8
35. produce various types of writing (e.g. poems, recipes, news articles, etc.)	39	21	38
36. write for an audience other than the teacher	58	23	18
37. write on their own (self-initiated)	73	13	12
MEAN OVERALL PERCENT	**64**	**17**	**17**
III-H Spelling skills as indicated in their attempts to provide spelling of:			
38. new words	74	14	11
39. words previously in spoken language only	68	19	12
40. more irregular words	55	26	18
MEAN OVERALL PERCENT	**66**	**20**	**14**

Table 3 (continued)

Significant Gains in Skill Areas	Frequency Distribution Percent Responses		
	YES	UNSURE	NO/NR
III-I Reading skills as indicated by ability to:			
41. recall information when reading	58	28	12
42. explain in their own words what they have read (comprehension)	62	25	12
43. apply what they have read to other situations	45	37	16
44. form their own conclusions about what they have read	53	31	14
45. give reasons for something happening in a story	60	25	13
MEAN OVERALL PERCENT	**56**	**29**	**30**

TABLE 4

WTR Paraprofessional/Classroom Teacher and Classroom Paraprofessional Observations on Whether Most Students Learn Social, Computer, Reading and Writing Skills Better in the WTR Program Than if There Was No Such Program

N=361

Most Students Learn the Following Skills Better in WTR Program	Frequency Distribution Percent Responses		
	YES	UNSURE	NO/NR
46. social skills	46	26	26
47. computer skills	93	3	3
48. listening skills	61	26	11
49. letter recognition skills	65	19	15
50. sound/symbol correspondence	73	14	10
51. reading skills	55	23	20
52. spelling skills	63	19	18
53. word pronounciation skills	62	23	15
54. chart reading skills	47	35	17
55. skills in working independently	62	18	18
MEAN OVERALL PERCENT	**63**	**20**	**15**

TABLE 5

WTR Paraprofessional/Classroom Teacher and Classroom Paraprofessional Observations on Whether as a Result of the WTR Program, a Student Who is Absent or Tardy Frequently, on Enrolling in WTR, Significantly Improves His/Her Attendance

N=361

	Frequency Distribution Percent Responses		
	YES	UNSURE	NO/NR
56. Improving Attendance	8	38	51

TABLE 6

Demographic Background of Respondents by Percent Frequency

N=361

57. Position

A.	WTR Paraprofessional	13
B.	Classroom Teacher	61
C.	Classroom Paraprofessional	24
D.	Other	1

58. Teaching Responsibility

A.	Kindergarten	39
B.	First Grade	42
C.	Special Education	6
D.	Classroom Paraprofessional	3

59. School year WTR Lab was implemented

A.	1985-1986	7
B.	1986-1987	26
C.	1987-1988	43
D.	1988-1989	21

60. Time period for which classes were taken to WTR Lab

A.	Less than six months	34
B.	Six months	11
C.	One year	14
D.	Two years	23
E.	More than two years	18

61. Elapsed time between training and when WTR Program began

A.	1-3 weeks	33
B.	4-6 weeks	29
C.	7-9 weeks	25
D.	2 years	1
E.	More than two years	11

TABLE 7

Adequacy of the Provision of Training by Percent Frequency of Respondents

N=361

Training Components	Percent Frequency of Responses		
	ADEQUATE	**UNSURE**	**INADEQUATE**
62. WTR philosophy	89	5	14
63. K-1 language development components	80	13	4
64. management	81	9	6
65. correlation with K-1 curriculum	75	15	7
66. writing across the curriculum	67	23	6
67. writing development	83	9	4
68. word processing	77	14	5
69. parental involvement	48	27	20
70. computer technology	71	14	11
71. student behavior in labs	79	9	9
	YES	**UNSURE**	**NO**
72. Was the information you obtained at the training helpful to you in the WTR lab?	88	3	3

TABLE 8

Support and Maintenance of WTR Lab

N=361

73. Frequency of time range for WTR lab visitation by coordinator and staff as observed by WTR paraprofessional, teacher, and classroom paraprofessional

Time Range	Frequency of Responses
(A) Weekly	1
(B) Bi-weekly	1
(C) Every other month	6
(D) Quarterly	49
(E) Other/No Response	43

74. Respondents' opinion of frequency of problems with equipment

Time Range	Frequency of Responses
(A) Never	28
(B) Weekly	15
(C) Bi-weekly	10
(D) Bi-monthly	33

75. Respondents' opinion on range of time period for remedy of problems

Range of Time Period	Percent Responses
(A) Immediately	32
(B) Less than a week	19
(C) Less than 2 weeks	11
(D) A month or longer	17

76. Respondents' opinion on adequacy of supply of equipment and supplies

Category	Percent Responses
(A) Yes	74
(B) Unsure	9
(C) No	11

77. Respondents' opinion on frequency with which the Small Street Journal provide them with helpful ideas and information

Scale of Frequency	Percent Responses
(A) Very often	6
(B) Often	34
(C) Seldom	29
(D) Almost never	17

Table 8 (continued)
Support and Maintenance of WTR Lab

78. Respondents' opinion on frequency of participation in a WTR training workshop after school

Category	Percent Responses
(A) Monthly	1
(B) Every other month	1
(C) Quarterly	5
(D) Annually	11
(E) Never	79

79. Respondents' opinion on frequency of participation in a WTR training workshop on a teacher workday

Category	Percent Responses
(A) Monthly	1
(B) Every other month	1
(C) Quarterly	6
(D) Annually	12
(E) Never	75

80. Respondents' observation on how parents were oriented to the WTR Program

Category of Orientation	Percent of Responses
(A) PTA meeting or grade meeting	25
(B) Video	1
(C) Letter	13
(D) Two or more of the above	42
(E) No orientation offered	14

81. Main person conducting orientation by percent observers

Category of Personnel	Percent Observers
(A) WTR Coordinator	28
(B) WTR Assistant	6
(C) Principal or ILT	3
(D) WTR Lab Paraprofessional	34
(E) Other	9

82. Parents' feelings about WTR by percent of respondents

Range of Feelings	Percent of Respondents
(A) Like it very much	39
(B) Like it	22
(C) Not sure how parents feel	35
(D) Dislike it	1
(E) Dislike it very much	0
(F) No response	3

Table 8 (continued)
Support and Maintenance of WTR Lab

83. Number of stations completed by students per day in a lab by percent of respondents

Number of Stations	Percent of Respondents
(A) 1-2	12
(B) 3-4	76
(C) 5-6	9

84. Frequency of WTR follow-up by teacher in his/her classroom

Frequency Range	Percent of Teachers
(A) Almost Always	13
(B) Often	47
(C) Seldom	32
(D) Almost Never	7

Make Words Stations by extent of students' feelings as rated by respondents on following scale: (A) Like it very much (B) Like it (C) Show no preference (D) Dislike it (E) Dislike it very much

Writing to Read Stations	Percent Rating				
	A	B	C	D	E
85. Computer Word Cycle Station	55	36	5	2	2
86. Work Journal Station	24	42	22	11	2
87. Listening Library Station	35	41	15	7	1
88. Make Words Station	45	37	12	3	1
89. Writing Computer-Table Station	71	22	1	4	2
90. Sixth Station	38	38	19	3	2

91. Feelings that WTR Program uses time that should be used for regular classroom

Category of Responses	Percent Frequency of Respondents
Yes	32
Unsure	17
No	51

Table 8 (continued)
Support and Maintenance of WTR Lab

92. Relative influence in the determination of activities for the Make Words Station

Category of Influencers	Precent Frequency Responses
(A) Teacher	10
(B) WTR Paraprofessional	44
(C) Classroom Paraprofessional	2
(D) Two or more of above	39
(E) Other	3

93. Professional relationship between the WTR paraprofessional and teacher

Professional Relationship	Percent Responses
(A) Excellent	57
(B) Very Good	23
(C) Good	12
(D) Fair	6
(E) Poor	1

94. Respondents' observation of the frequency with which students print their stories

Category of Frequency	Percent Responses
(A) Daily	22
(B) 2-3 times a week	39
(C) Once a week	25
(D) Once every other week	6
(E) Once a month	2

95. Respondents' opinion on frequency of students composing in the WTR Lab

Category of Frequency	Percent Responses
(A) Daily	42
(B) 2-3 times a week	42
(C) Once a week	25
(D) Once every other week	6
(E) Once a month	2

96. Respondents' opinion on whether skills learned in WTR do transfer to regular classrooms

Category of Responses	Percent Responses
(A) Yes	77
(B) Unsure	17
(C) No	7

Table 8 (continued)
Support and Maintenance of WTR Lab

97. Respondents' opinion on whether WTR correlate with the classroom curriculum

Category of Responses	Percent Responses
(A) Yes	72
(B) Unsure	17
(C) No	8

98. Respondents' overall opinion on the WTR Program in school

Category of Responses	Percent Responses
(A) Like it very much	48
(B) Like it	32
(C) Not sure	11
(D) Dislike it	4
(E) Dislike it very much	2

99. Respondents' observation on number of periods per day in which WTR Lab is in use

Range of Periods	Percent Responses
(A) 1-2	2
(B) 3-4	11
(C) 5-6	27
(D) More than 6	7
(E) No Response	53

100. Respondents' opinion observation usage of WTR Lab

Category of Usage	Percent Responses
(A) K-1	23
(B) Special Education	1
(C) A & B above	20
(D) Other	1

APPENDIX A

Listening Library Station

Details of Observations and Comments

There were a total of 13 comments concerning the Listening Library station. Several comments suggested a need for more and a greater variety of books and "books which can be read in 10-15 minutes." Yet this limiting the time would greatly affect the quality and variety of books. The teacher's manual also recommended that teachers could certainly "...create your own audio cassettes to add to the Listening Library station." (p. 9-4). One paraprofessional, who had recorded some stories herself, said that she planned to ask certain key persons - the principal, the ILT, and media specialist - in the school to record some books.

"The children lose interest at the listening stations after a couple of weeks. We have the most problems there. Need more boo and the speed of the language should increase as the reading skills of the children increases."

"The only stations that the children did not seem to enjoy or use much was the Listening Library. They were bored listening to the same stories. This station is the only one where the children do not get any feedback on their activity."

APPENDIX B

Letter Recognition

Details of Observations and Comments

In the area of identifying upper and lower case letters, some kindergarten students could not locate the letters on the keyboard when at the computer listening station or at the word processor. Trying to find the letters on the keyboard affected student fluency at both the Computer Listening and at the Writing Typing stations. At the time of the observations, however, kindergarten students had only begun WTR.

Comments indicated that this inability to recognize letters was sometimes a problem. For example, "I have found a student who does not know his/her alphabet and cannot match upper case/lower case letters cannot work well in the Writing to Read Program. This student may pass the tests on the computer because he has memorized which keys he has to hit. He or she is unable to spell the word orally or associate the letters with their sounds." Additional comments from the questionnaires and from interview with WTR paraprofessionals indicated that when students used WTR letter recognition software, "...the students made a very smooth transition into the program and are much more comfortable with computer and the keyboards than the group we had last year..."

APPENDIX C

Writing Skills

Details of Observations and Comments

In one lab, the WTR paraprofessional gave students an idea of what to write about by showing them a picture, telling them part of a story, and then asking them to complete the story. In some cases, teachers said that they talked with their students in the classroom prior to coming to the lab about what to write. Trainers discouraged the use of "story starters," but encouraged the use of "story seeds."

Evaluators rarely observed students producing various types of writing or writing for an audience other than the teacher, although students in one school had written letters to President Bush and students in another school wrote to "Writing Pals" in another state. Yet, given the time constraints and teacher training, these areas of producing various types of writing and writing for another audience would be more likely to receive less emphasis. It is also possible that each student's stage of writing development would affect the production of various types of writing and writing for another audience.

Certainly, the development of writing skills are dependent on what the teacher does to facilitate student writing development.

APPENDIX C - (Continued)

In the majority of cases, teachers directed students, helped students with the technical aspects of the computer, and helped students to sound out words. On the other hand, a few teachers were observed working with students prior to their going to write, asking questions and making suggestions. As one WTR paraprofessional pointed out, there is a big difference when a teacher asks, "What are you going to write about today?" and "I see you have on new tennis shoes. What are you going to do in those?"

Another teacher commented, "Research shows that children need to be taught to write creatively. WTR totally ignores this vital step. ...This program could be so much better if teachers were trained to teach creative writing and children were actually given the tools (such as choosing a topic, gathering/organizing thoughts, etc.) with which to write."

The majority of comments from teachers and paraprofessionals on the questionnaire were favorable. One WTR paraprofessional gave several examples of what her kindergarten students were writing, exclaiming that she just wouldn't have believed all that students could do.

APPENDIX D

Training

Details of Observations and Comments

Several comments dealt with a request for more "hands on experience" with the equipment. "Three days was not adequate training for the program. How are students expected to know what they're doing when their teachers don't? The children need a stronger orientation."

Trainers pointed out that teachers would need to spend time - possibly after school to "play with" the word processing program, Primary Editor Plus. Time on the computers was limited/brief in the training the researcher attended. [One time in afternoon for 10 minutes at each station and one time in the morning for about 1 hour where an IBM representative was going over directions about writing and we could take turns at the computer.]

Although Dr. Long had stressed the importance for limiting the training classes to 35 persons, 58 persons were in the same training class. However, 71% of the respondents indicated that the training in computer technology was adequate.

Observations in the labs also indicated that there might be a need for teachers to know more about the equipment. For example, several teachers had to ask paraprofessionals about how to print students' stories or how to save information.

APPENDIX D - (Continued)

Oftentimes, the teacher and student had to wait until the paraprofessional could assist them. Teachers were heard commenting to the paraprofessional that "sometime I need to get you to show me how to ..." "There needs to be a day of just computer talk, divide in small groups and work together. Maybe having two or three at a school with an IBM representative." "The teachers usually have no knowledge and usually do not come in for any orientation until they bring their class in. I visited seven schools to observe their program." Several other comments indicated that the sharing among other paraprofessionals and teachers visits to other schools would be a valuable way of learning not only about computers but ways of managing ideas etc.

APPENDIX E

Teacher Role

Details of Observations and Comments

Researchers observed various roles that teachers assumed upon entering the lab. For the most part, teachers stayed at the Writing/Typing Station to monitor student writing. Some teachers, however, would also walk around to ensure that students were performing the required task at the other stations. The lab paraprofessional was usually at the Computer Station and, if, there was no classroom paraprofessional, also at the Work Journal Station.

The degree to which teachers helped students also varied. For example, some teachers did just that - monitor, helped students to locate their stories, print, occasionally asking "What are you going to write about today?" On the other hand some teachers were observed working with students prior to their going to the Writing Station -- asking them questions to get them ready to write. All of the teachers were accepting of the spelling attempts of the students and encouraged students to try to "sound out" to spell the words the way they sounded.

The teacher's manual states that the teachers were to monitor activities at all stations, except the Computer Station (where the aide works with students.) For example, helping students find

APPENDIX E - (Continued)

previous stories, helping with spacing, helping - in several cases to sound out words - students would even ask the observers/researchers to help with sounding out words, and asking what keys to press.

For the most part, teachers were observed at the Writing Station, on one occasion observed teacher reviewing students on their work journal lesson. Teachers did monitor some of the other stations that were nearby, such as the Listening Library to make sure students were following along in books. One teacher went over work journal words with her students and worked with her 1st graders at the writing table before allowing them to go to the word processor. She asked questions, e.g. "Where would you be to see a horse and cat?" and to another student, "I like those capital letters."

This comment seems to typify what was observed in the lab. "The success of each class is directly related to the teacher's interest and participation. If the teacher did not want to be in the program it carried over to the children and conversely if the teacher was enthusiastic about using WTR skills in the classroom it made a big difference. There didn't seem to be anything the lead teacher or I could do to reverse the negative attitude as it was not related to WTR alone."

APPENDIX E - (Continued)

The training emphasized that furnishing activities for the Make Words Station was not the paraprofessional's job. Trainers emphasize that "... need to spend quality time there ... You decide who needs what." One paraprofessional reported that some teachers "sit in the WTR lab and grade papers or talk with the [classroom] paraprofessional." This type of behavior was never observed, however. This same paraprofessional pointed out the importance of the teacher to take the lab seriously.

APPENDIX F

Paraprofessional Role

Details of Observations and Comments

The teacher's manual stated that the "primary responsibility of the WTR paraprofessional is to monitor the Computer Station operations" (p. 6-19). The training reiterated that the WTR paraprofessional was responsible for the lab operations. As has been discussed previously, however, in the section on the teacher's role, the paraprofessional was frequently more than a lab manager.

Some paraprofessionals did just that -- act as a manager. One WTR paraprofessional when asked, after the observation, about a student who just typed letters when at the Writing Station, explained that it was not her role to tell students how or what to write. The paraprofessional explained that that was up to the the teacher to control and that some teachers did not allow that and expected students to write a story. On the other hand, most WTR paraprofessionals did much more and demonstrated effective teaching behaviors such as questioning, encouraging, evaluating student performance, encouraging students to write. Most of the paraprofessionals interviewed said that they furnished the Make Words activities though some teachers were observed bringing their own activities to the lab.

APPENDIX F - (Continued)

Paraprofessional Salary

Eleven Comments and Interview with paraprofessionals indicated they would like more pay.

"... very responsible position. The volume of work and the skills used are far above the generic requirement for the average classroom paraprofessional. We certainly were told we would get the same salary as the paraprofessional, but no one told us how many jobs would be included in the one position. The effectiveness of the program in this school depends on me. I'm the front-line promoter for our program. Good public relations are essential. I understand we will be doing the orientation next year for our parents. I view this as a challenge. My teachers tell me repeatedly that I'm grossly underpaid! In spite of all the work, I look forward to school each day with great anticipation." "We are totally responsible for every piece of equipment, ordering supplies, managing, evaluating, orientation of and helping students, not to speak of decorating and general upkeep of our labs. It'd surely be a reward to see our salary upgraded."

APPENDIX G

Follow-up

Details of Observations and Comments

Fifteen comments were categorized as relating to follow-up:

Paraprofessionals who were indicated said that some teachers take folders back to their classroom for editing, illustrating, or compiling a book; other teachers leave student folders in the room. One teacher said she tied the stories into her art projects. Trainers suggested that student stories could correlate with math, science, or social studies thus, using those subjects as story seeds.

"Skills taught in the classroom carried over to the WTR program rather than vice-versa, I believe."

On the other hand, "We generally don't get to do a lot of follow-up in the classroom due to a lack of time." "I am seeing little carryover in the classroom - my low reading group of 11 (8 or whom had WTR last year) are still low except for better sounds. Comprehension continues to be weak as does vocabulary word recognition. Most don't recognize cycle words when they appear in print. Most students don't connect the irregular vowel

APPENDIX G - (Continued)

sounds with WTR cycle words." "I am not sure that kindergarten children can transfer the skills either from classroom to WTR or WTR to classroom. This has been one of my biggest frustrations with the program, but the children are learning."

After Writing to Read

Principal comments indicated a need to follow-up WTR with similar kinds of experiences in grades 2-7, "Should keep children expressing themselves freely ...". Comments from the teacher/paraprofessional questionnaire reiterated that, "This 'startee' WTR program has started students on a very effective, creative writing/composing program, [sic] it needs to be continued throughout a student's academic career - COMMUNICATION IS EVERYTHING!"

Some comments indicated a need to continue with some follow-up software, such as "Bouncy Bee Learns Words," after students finish cycle 10. In addition, "It would be wonderful to have an IBM computer and printer in our room so that our children could continued to write on the computer after their portion of the year is completed."

APPENDIX H

Time Out of Classroom

Details of Observations and Comments

Comments regarding the time away from the classroom were mixed. Generally, however, comments indicated that this was just one more thing for teachers to do. "It is difficult to complete the regular reading program with so much time taken out for WTR. I like WTR but don't think the skill development is equal to the amount of time spent in the lab. I have to rush and put pressure on all of us to try to get in the other skills taught in Macmillan and still have time for penmanship, spelling, English, and story time. It makes the day stressful because we have to do too much in a day - AND ALL THE THINGS are important. There's just not enough time to do it all. ===STRESS for teacher and students."

Several suggestions both in the comments and in informal interviews with teachers recommended that students go two or three times a week rather than everyday for an hour. This would also allow for more time in the classroom as well as avoid the boredom. For example, "I think WTR program would excite the children more if they didn't go everyday because when they miss it for a day or two they become very excited to go."

"Would like to have only half of class go at one time and give extra help to other half in regular classroom or would like to go 3 times per week."

APPENDIX H - (continued)

Some of the principals' comments reflected similar feelings that going to WTR everyday was too much and that it was difficult to teach the required curriculum.

"...I find it impossible to justify WTR using one hour of my instructional time everyday. I do not feel the accomplishments meet the expense of my time. In order to meet state regulations I have to take this hour from my classroom reading instruction, which leaves approximately one hour and ten minutes to teach 23 children, 3 groups, an entire day's reading lesson. It is impossible! Especial concern is the fact that WTR takes this time through at least Jan. 1st, the most important time for covering objectives for the GCRT. WTR teaches a very small number of GCRT objectives. I end up with a class that feels pressured by time limitations and gains that in no way compensate."

These comments seem to indicate that teachers see WTR as taking time away rather than as a supplement to the regular program.

Though not the majority, one fourth of the respondents did indicate that they did feel that the WTR uses time that should be used for regular classroom teaching.

APPENDIX I

Problems with Scheduling

Details of Observations and Comments

No problems with scheduling were observed; however, informal interviews and comments on the teacher/paraprofessional questionnaire indicated that in a few cases there might be problems.

"WTR program was not begun for 1st grade until November 9th [this school was identified and the program was implemented in 1987-88] stopped last week in January. Kindergarten has had orientation four times for a total of 1 hour. WTR is suppose to begin March 6th. Why so much time not used with children? In my opinion WTR should be ready to begin the day classes begins. These comments pertain to 1988 year. We have not begun WTR in 1989 as of yet - 3-6/89."

"Our WTR paraprofessional spends too much time idle - no children. We started six weeks into school year and finished second week of February. No one uses it currently 3/14! Kindergarten has not started. Not even the rehoused kindergarten who had it last year! It takes up too much space not be used at least 90%. Even when 1st grade went, she had only 3 classes daily. She could be 1/2 day then and save money! ...could use that classroom for much better benefit if it is not used all day."

APPENDIX I - (Continued)

A few of the WTR paraprofessinals, an assistant principal, or an ILT were contacted by phone and asked if they would submit their lab schedule. No problems or areas of concern were noted from the schedules that were turned in to the researchers. The one referred to previously, reported that orientation for 1st graders was conducted between September 7-30, 1988, and they began October 3, 1988, and continued until March 3, 1989. Furthermore, kindergarten began orientation March 6 and was scheduled to continue to March 13 for 140+ students. In addition, first graders were scheduled to continue in the WTR lab for 70-75 minutes each Friday. Kindergarten classes were scheduled to begin March 14 and continue until June 6. Obviously, there is a discrepancy which indicates a need for further investigation.

APPENDIX J

Student Achievement

Details of Observations and Comments

The area of achievement had greatest number of comments (59). Wtr paraprofessionals were questioned concerning whether or not they felt the program was beneficial for low and high achieving students. Generally, the WTR paraprofessionals said that WTR helped most students. In fact, the trainers emphasized that the program could be used with students in special education classes.

"I'm excited about what I see happening for my self-contained BD class (10 boys, 1st and 2nd graders)."

"I love WTR! My brightest students and my 'special needs' students benefit and show progress. I do have students who have shown little or no progress."

"I think WTR helps our students in their learning to sound out words and in composing stories. We had some bright students that really created some amazing stories. It helped our slow students in learning their alphabet."

APPENDIX J - (Continued)

"WTR is a fantastic program for students that are ready to learn the skills it reinforces. However, the needs of the child less able to learn in this capacity has not been addressed thoroughly enough in this program. I strongly support the program but I also feel that the needs of the child still practicing readiness skills must be considered."

"I always see tremendous improvement with those students in the 'high risk' category after only a few weeks."

"I feel it especially helped our slower children and helped improve their confidence."

On the other hand, there were comments similar to the following," It is an excellent program for average and above average students. It is a waste of valuable time for high risk children, children who do not know their ABC's and immature children."

"The 'brighter' children seem to benefit the most. The slower child will usually just sit until the teacher has time to work with them one on one at the word processor."

Of course, the researchers who observed in the classroom had no idea as to students' abilities; it was noted, however, that some students had more difficulty in composing and staying on task at some of the other stations.